Integrated Solutions for Early Dust Detection and Forecasting

Finest detection capabilities

raymetrics
lidar systems

Remote Dust Monitoring systems

Given the uncertainty regarding future dust emissions and their potential large impact in human lives and the economy, the importance of deploying alert mechanisms for dust storms is imperative. These should include advanced observation systems and forecasting, tightly integrated in effective early warning systems, that will improve preparedness and emergency response.

Raymetrics, combining almost two decades of innovative lidar development with partnerships with scientific leaders, produces an integrated dust monitoring system that provides unsurpassed monitoring capability and accuracy in dust forecasting and early warning.

Raymetrics offers:

• State-of-the-art lidar dust detection systems

• Advanced data analysis

• Modelling services and forecasting

• Cloud-based visualization and control platform

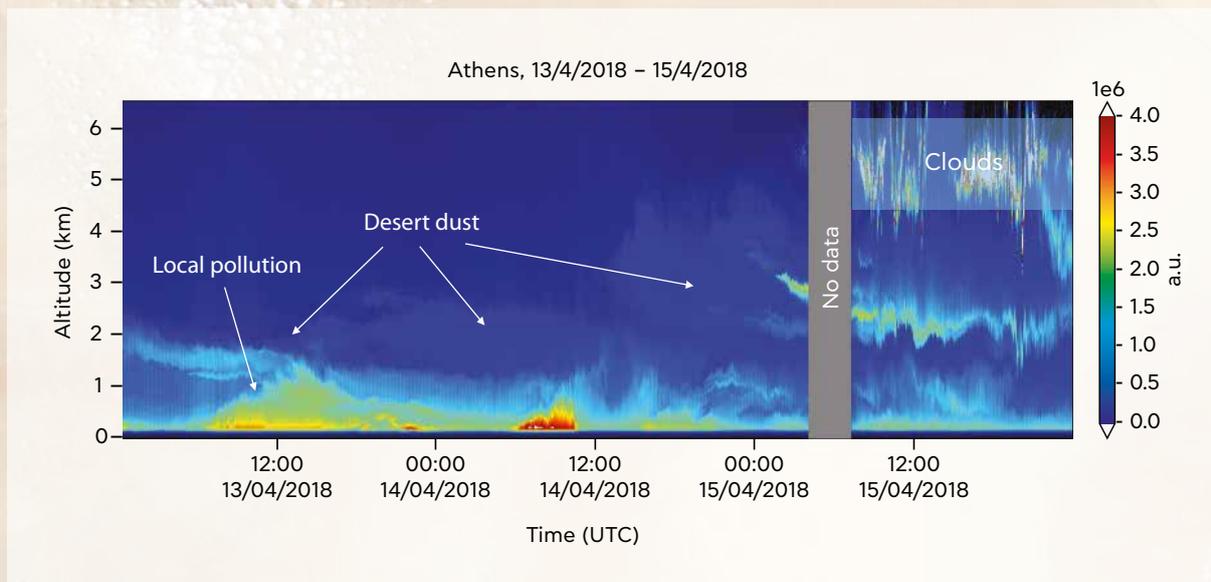# Why choose a Remote Dust Monitoring system from Raymetrics?

• Accurate detection and quantification of dust aerosol, from the ground up to 20 km altitude.

• Vertical profiling for dust can be used as a bridge between in situ and satellite observations.

• Remotely detects incoming dust and indicates time of arrival, helping forecasters for early warning scenarios.

• Remote sensing observations with Raymetrics systems based in Lidar technique provide:
  ▷ near real time monitoring
  ▷ model data, verification/validation
  ▷ model data assimilation
  ▷ regional aerosol characterization

• Distinguish dust from other aerosol types (e.g. urban pollution, smoke), based on state-of-the-art aerosol depolarization measurements.

• Helps local Authorities to conform to AQD Directive (EC,2008).

A whole new dimension in Environmental Operations

Dust aerosols impact the climate system by influencing the radiation budget, cloud processes, and various biogeochemical cycles. Due to numerous impacts of dust on health, environment and climate, there is high societal and research interest to:
  ▷ better understand the atmospheric dust process
  ▷ prevent its unwanted impacts
  ▷ predict dust transport events

Innovative techniques and methodologies contribute to better understanding all related processes to any such event.

Athens, 13/4/2018 – 15/4/2018

Remote Dust Monitoring systems for higher efficiency in observations

Unlike any other sensors, Raymetrics products are the only systems to provide, scientific-grade dust measurements up to 20Km.

What are the benefits to Meteorology and Related Agencies?

• Better equip forecasters to issue more precise and detailed forescasts

• Significantly contribute to reducing the impact of hazards

• Reduce costs and save lives

Systems Suitable for:
  ▷ Meteorological Agencies
  ▷ EPAs, CPAs
  ▷ Airports

Intelligent remote sensing advantages

• It works day and night as it is based on its own source of radiation.

• It gives near real-time results, since no sampling and time-consuming chemical analyses are required.

• Fully automated-remotely controlled.

CERTIFICATES

Raymetrics is to become the first atmospheric LIDAR manufacturer able to offer certifications for its products, and for their systematic uncertainties, from LiCAL/ACTRIS, according to document doi:10.5194/amt-9-4181-2016.

The company is ISO 9001:2008 certified.

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Since 2002 Raymetrics has been designing and manufacturing atmospheric remote sensing systems for meteorological and other similar applications.

Today we are the world leader in the rising wave of remote sensing technology in operational and commercial sectors such as Meteorology, Aviation, Environmental Protection, Mining, Oil & Gas and Heavy Industry.

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